

# **A Knowledge-Based Strategic Theory Framework for Knowledge Management: Knowledge Creation and Transfer in Businesses**

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Co-supervisor: Professor Thomas Clarke

A thesis submitted in partial fulfilment of the requirements for the degree of  
Doctor of Philosophy (Ph.D.) at the University of Technology, Sydney.

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## **Certificate of Authorship / Originality**

I certify that this thesis has not previously been submitted for a degree nor has it been submitted as part of requirements for a degree except as fully acknowledged within the text.

I also certify that the thesis has been written by me. Any help that I have received in my research work and the preparation of the thesis itself has been acknowledged. In addition, I certify that all information sources and literature used are indicated in the thesis.

A handwritten signature in dark ink, appearing to read 'Duncan', is written over a horizontal line.

Glen William Duncan

## Acknowledgements

Little did I realise what I was getting myself into when I started researching my thesis in 1998. The journey that I have been on has been extremely arduous. In a sense, this thesis has been my own personal psychological Mount Everest. During this time my wife and I had two children, I changed jobs four times and we moved house twice. What I have learned is not what I expected to learn when I set out. However, despite the hardship, the process has been worthwhile. The process has taught me the importance of intellectual rigour, the value of revision in writing and to strive for quality in all aspects of the research process.

Throughout all the PhD years, Suzan has been the one constant. Thankyou sweetheart, for your love, your unwavering support, patience and encouragement. Your belief in me is even greater than my own and never ceases to amaze me. Now Aden and Lua, you can have a father who no longer has the weight of a PhD thesis hanging over his head. To my dear baby, I am looking forward to your arrival and getting to know you.

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## Preface

"The third Tajalli is concerning arts, crafts and sciences. Knowledge is as wings to man's life, and a ladder for his ascent. Its acquisition is incumbent upon everyone. The knowledge of such sciences, however, should be acquired as can profit the peoples of the earth, and not those which begin with words and end with words. Great indeed is the claim of scientists and craftsmen on the peoples of the world. Unto this beareth witness the Mother Book on the day of His return. Happy are those possessed of a hearing ear. **In** truth, knowledge is a veritable treasure for man, and a source of glory, of bounty, of joy, of exaltation, of cheer and gladness unto him. Thus hath the Tongue of Grandeur spoken in this Most Great Prison."

Tablets of Baha'u'llih, pp. 51-52 )

"Man is the supreme Talisman. Lack of a proper education hath, however, deprived him of that which he doth inherently possess."

(Baha'u'llah, Tablets of Baha'u'llah, p. 161 )

"The Great Being saith: Regard man as a mine rich in gems of inestimable value. Education can, alone, cause it to reveal its treasures, and enable mankind to benefit therefrom."

(Baha'u'llah, Tablets of Bahá'u'lláh, p. 162)

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## List of Acronyms

ABS	Australian Bureau of Statistics
ATO	Australian Taxation Office
AVCC -	Australian Vice Chancellors Committee
BLS	Business Longitudinal Study
CURF -	Confidentialised Unit Record File
EDI	Electronic Data Interchange
HR	Human Resource
HRM	Human Resource Management
I&CT	Information and Communication Technology
KBV	Knowledge-Based View
KM	Knowledge Management
OO	Organisational Development
OL	Organisational Learning
R&D	Research and Development
RBV	Resource-Based View
TAFE -	Technical and Further Education
TCE	Transaction Cost Economics
TQM	Total Quality Management

## Abstract

The discourse on knowledge management (KM) has emerged relatively recently in the field of management. Organisational and strategic theories have been developed which seek to explain the existence, boundaries, structure, management and competitive advantage of organisations based on knowledge. These theories are consistent with one thread from the overall discourse which argues that the management of knowledge within an organisation is an important activity required for maintaining competitive advantage in a hypercompetitive external environment. Despite the extensive interest in this area, there is still limited agreement even about some of its fundamental principles. This plurality of perspectives is due to the diversity of disciplines, theories and objectives with which the area is enriched by both academics and practitioners alike.

Many independent KM initiatives have also been proposed for managerial use under the KM umbrella. Such activities include meetings, mentoring schemes, training, job rotation, site visits, conferences and exhibitions, and internal and external collaborations. Many of these initiatives are relatively autonomous and independent concepts. Generally these concepts have been first identified in the practitioner literature and it is unclear where they fit within academic frameworks. In particular, the relationship between KM initiatives and important related academic concepts such as knowledge transfer, organisational learning, knowledge creation and innovation is not clear. This lack of agreement, clarity and cohesion in the KM discourse naturally suggests the following research problem: What is the relationship between KM initiatives, organisational learning, knowledge transfer, knowledge creation and innovation?

Taking an organisation and strategic management theory perspective, an exploratory framework for understanding and explaining KM is developed within this thesis. Theoretically, this framework draws together perspectives from the resource-based view of the firm, organisational learning and innovation literatures to propose that the two fundamental KM processes are knowledge transfer and creation. Knowledge transfer supports learning and the utilisation of available internal and external knowledge resources within an organisation. Through knowledge transfer and learning, new knowledge can be created and organisational innovation takes place. These two

processes are then integrated into Whittington, Pettigrew et al.'s (1999) framework for organisational change. Various disparate KM initiatives are also positioned within the developed framework based on whether they facilitate knowledge transfer by altering organisational boundaries, processes or structures.

The essence of the developed framework is represented pictorially by a research model. This research model depicts the framework's key concepts and the relationships between them. It also begins to represent some of the complex dimensionality inherent in the framework. The research model is explored empirically using data from the Business Longitudinal Survey conducted by the Australian Bureau of Statistics. Responses from 3014 Australian businesses surveyed yearly from 1994 to 1998 are analysed using chi-squared and logistical regression statistical techniques. This sample consists of 1344 small and 1670 medium businesses across eleven industries. In empirically exploring the research model, some of the dimensionality of the framework is explored. However, the process also provides a confirmatory function by providing empirical support for many of the aspects of the framework.

Statistical support was found for all elements of the research model. Odds ratios for the various KM initiatives examined ranged from 1.292 to 3.554. These results confirm the value of these initiatives for facilitating the transfer of knowledge. They also suggest that the dimensionality of these constructs represented in the model should be explored further. Of all the KM initiatives, research and development emerged as the most effective initiative for facilitating knowledge transfer and creation. This finding suggests that research and development should be the very first initiative considered by managers looking to implement a KM program. It also suggests that future research on knowledge transfer and creation should pay particular attention to this particular initiative. The logistical regression analysis demonstrated that changing organisational boundaries, processes and structures all contribute to facilitating knowledge transfer which lead to knowledge creation. These results provided support for the most important contribution of the thesis. This contribution was the development of an integrated and exploratory conceptual framework which can serve as a foundation stone for the field of KM.